PROJECT TITLE :

Smart Medication Adherence System

TEAM MEMBERS :

Madhavan S

Praveen R

Ramkumar A

ABSTRACT :

The "Smart Medication Adherence System" is designed to enhance medication management through advanced AI and machine learning technologies. The system begins with the digitization of prescriptions via scanning, utilizing Optical Character Recognition (OCR) to extract and interpret medication details. AI algorithms then organize the medications into a structured schedule, displaying them by time of day (morning, afternoon, evening) to ensure adherence. The system also includes a robust reminder function: if a user misses a dose, it automatically sends a notification to their phone, prompting them to take their medication. This innovative approach aims to improve medication adherence, particularly for users with limited language proficiency or those who struggle with traditional medication management methods, by providing clear, timely reminders and schedule organization in a user-friendly interface.

Existing System:

Current systems for medication management and adherence leverage various technologies to assist users in maintaining their medication schedules. OCR technologies, such as Google Cloud Vision OCR and Adobe Acrobat OCR, convert printed prescriptions into digital formats, making it easier to track and organize medication information. For medication adherence, apps like Medisafe and MyTherapy offer features such as automated reminders, dose tracking, and adherence reporting, which help users manage their medication regimens effectively. PillPack by Amazon Pharmacy simplifies medication management by pre-sorting medications into dose packs organized by date and time, reducing the risk of missed doses. Additionally, CareZone provides a comprehensive solution with medication reminders, health tracking, and secure data sharing with caregivers. These existing solutions highlight the integration of OCR for digitizing prescription data and various reminder systems for improving medication adherence, setting a foundation for developing more advanced, smart medication adherence systems.

PROPOSED SYSTEM :

The "Smart Medication Adherence System" aims to revolutionize medication management by integrating advanced OCR and AI

technologies to enhance user adherence and simplify the medication process. The system starts with capturing and digitizing prescriptions using OCR technology, which extracts and converts medication details from scanned or photographed documents into a digital format. AI algorithms then process this data to create a customized medication schedule, organizing doses into clear time slots morning, afternoon, and evening based on the user's prescription. This schedule is presented through a user-friendly interface that makes it easy for users to follow their medication regimen. To ensure adherence, the system includes automated reminders that send notifications to the user's phone if a dose is missed, and also alerts designated contacts, such as caregivers or family members, to provide additional support if needed. By combining these features, the proposed system addresses challenges related to medication adherence, particularly for users with language barriers or complex regimens, offering a comprehensive solution for improved health outcomes and medication management.

CONCLUSION :

The "Smart Medication Adherence System" effectively combines OCR and AI technologies to enhance medication management by digitizing prescriptions and creating personalized schedules.

Automated reminders and notifications ensure users adhere to their regimens and involve designated contacts for additional support. This integrated approach addresses key challenges in medication adherence, leading to improved health outcomes and streamlined management. The system offers a transformative solution for better health management and user support.